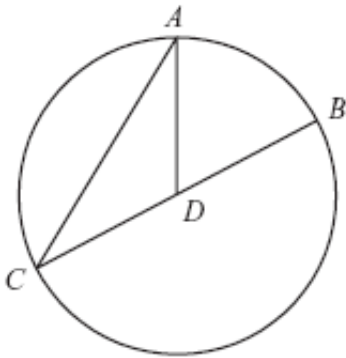




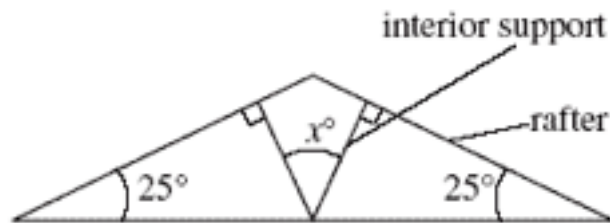
***Must show work OR explain why you chose the answer you picked to receive ANY CREDIT!

1. In circle D, \overline{BC} is a diameter, \overline{DA} is a radius, and $m\widehat{AB} = 60^\circ$.



What is $m\angle CAD$?

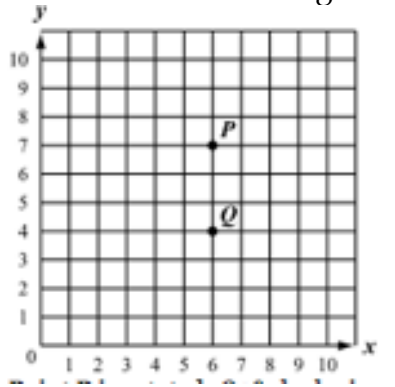
- a 30° c 65°
b 55° d 35°
2. Each of the two interior supports for part of a roof is perpendicular to a rafter, as shown below.



What is x , the measure, in degrees, of the angle formed by the two interior supports?

- a 50 c 90
b 65 d 130

3. Point $P(6, 7)$ and point $Q(6, 4)$ are plotted on the coordinate grid below



Point P is rotated 180° clockwise about point Q . What are the coordinates of the image of point P after this rotation?

- a $(3, 4)$
- b $(6, 1)$
- c $(6, 10)$
- d $(9, 4)$

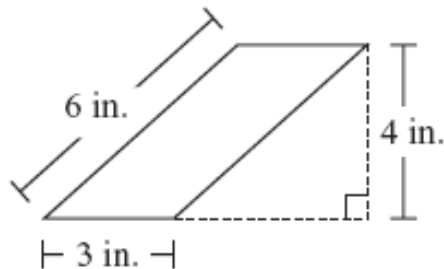
4. The triangle below is a cross section of a three dimensional object.



The triangle could **not** be a cross section of which of the following objects?

- a a pyramid
- b a rectangular prism
- c a cone
- d a right circular cylinder

5. A parallelogram and its dimensions are shown below.



What is the area of the parallelogram?

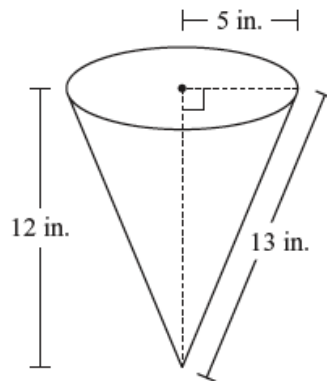
- a 12 sq. in.
- b 13 sq. in.
- c 18 sq. in.
- d 24 sq. in.

6. A sphere has a volume of $\frac{500}{3}\pi$ cubic centimeters. What is the total surface area, in square centimeters, of the sphere?

a 25π
b 40π

c 100π
d 400π

7. A container in the shape of a right circular cone is used to hold snacks at a town fair. The radius of the cone is 5 inches, as shown in the diagram below. Based on the dimensions in the diagram, which of the following is closest to the lateral surface area of the cone?



a 188 sq. in.
b 204 sq. in

c 377 sq. in
d 408 sq. in

8. A mechanic has two pieces of sandpaper of different sizes. Each piece is in the shape of a circle. The radius of the larger circle is 4 times the radius of the smaller circle. The area of the larger circle is how many times the area of the smaller circle?

a 2
b 4

c 8
d 16

9. Ms. Burke correctly weighed a tomato to the nearest ounce and recorded the weight. The weight she recorded was 13 ounces. What is the **least** possible actual weight of the tomato?

a 12.0
b 12.5

c 13.0
d 13.4